UNITED
NATIONS

E

Economic and Social Council

Distr.
GENERAL

E/C.10/1991/3
25 March 1991

ORIGINAL: ENGLISH

COMMISSION ON TRANSNATIONAL CORPORATIONS
Seventeenth session
10-19 April 1991
Item 4 of the provisional agenda*

TRANSNATIONAL CORPORATIONS AND ISSUES RELATING TO THE ENVIRONMENT, INCLUDING THE CONTRIBUTION OF THE COMMISSION AND THE UNITED NATIONS CENTRE ON TRANSNATIONAL CORPORATIONS TO THE WORK OF THE PREPARATORY COMMITTEE FOR THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT

Contribution of the Commission and the United Nations Centre on Transnational Corporations to the work of the Preparatory Committee for the United Nations Conference on Environment and Development

Report of the Secretary-General

SUMMARY

The present report is an interim version of a comprehensive and analytical report on possible measures that could encourage and mobilize transnational corporations to protect and enhance the environment while contributing to development. The report identifies five main themes on which the Commission on Transnational Corporations could make recommendations to the Preparatory Committee for the United Nations Conference on Environment and Development, namely: (a) internationally agreed standards and instruments; (b) transfer of environmentally sound technologies to developing countries on favourable terms; (c) international environmental management; (d) prevention of environmental deterioration; and (e) additional supportive measures.

* E/C.10/1991/1.

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INTRODUCTION

1. The Economic and Social Council, in its resolution 1991/71, requested a comprehensive and analytical report to serve as the basis for a "significant and action-oriented contribution" from the Commission on Transnational Corporations to the preparatory work of the 1992 United Nations Conference on Environment and Development.

2. The Conference is likely to demonstrate the scope and breadth of the global commitment to integrate environmental considerations in economic efforts to achieve sustainable development. It is a continuation of an international process that began in Stockholm in 1972, leading in 1986 to the General Assembly establishing the World Commission on Environment and Development to formulate a global agenda for environment and development. As acknowledged by the World Commission:

> "Sustainable development is ... a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are made consistent with future as well as present needs. We do not pretend that the process is easy or straight forward. Painful choices have to be made." 1/

3. The Commission on Transnational Corporations could suggest including in the final declaration of the Conference a section on general policy obligations of transnational corporations that would reflect the emerging consensus about the impact of transnational corporation practices and the role they can play in support of sustainable development. The Commission could also make recommendations, regarding the activities and responsibilities of transnational corporations, for inclusion in the proposed work plan/agenda for international, national and local environment and development efforts for the beginning of the twenty-first century. The Conference may also be the occasion for the signing of new global environment agreements on climate change, biodiversity and biotechnology. Since the activities of transnational corporations have a major impact on these issues, 2/ the Commission could suggest recommendations that relate, for example, to the role of transnational corporations in meeting reduction targets for emissions, new investments in non-greenhouse gas producing energy sources, transfer of greenhouse gas reducing technologies and investments aimed at preserving genetic materials.

4. Industry, including transnational corporations, is already evolving environmental policies as a result of both external influences and internal corporate demands. Firms are reacting to the requirements of new national legislation and regulations, the adoption of pending and new international agreements, heightened public expectations of environmental stewardship and decisions requiring expenditures for prior environmental damage. At the same time, transnational corporations are discovering additional investment opportunities in the environment area, by integrating resource and energy conservation in their activities, by recognizing the economic benefits of consumer goodwill, by being ahead of the regulatory process and by developing an environmentally oriented business culture. This trend is less evident in the activities of transnational corporations in developing countries.

A. Environmental importance of transnational corporations

5. While all firms affect the environment and development, transnational corporations in particular play significant roles in the sectors that directly affect the global environment. This critical and central role for the future of the global environment and for sustainable development is emphasized by the fact that transnational corporations are:

Key users of raw materials and the global commons;

Key developers and producers of products and production processes that can be harmful to the environment;

Key economic actors and investors with global operations and global strategies, including activities that are pollution-creating and possibly hazardous;

Key actors in channelling and fostering consumers' tastes, patterns of production and consumption, and lifestyles;

Key actors in the science and technology leap taking place, with enormous research and development capability in practically all domains of critical importance for sustainable development world wide (e.g., energy, transport, agriculture, environmentally sound technologies, information);

Key players on the global economic scene, and therefore directly and indirectly influential regarding economic and social performance of developing countries, and thus affect their abilities to respond to the requirements of sustainable development.

6. The extent to which transnational corporations through investments and activities dominate sectors with significant environmental impact should be viewed in the context of these roles. With respect to climate change, for example, transnational corporations are involved in activities that generate more than half of the greenhouse gases emitted by the six industrial sectors with the greatest impact on global warming. These sectors together account for 80 per cent of the greenhouse gas problem. 3/

7. Ozone-depleting chloroflourocarbons (CFCs) were produced almost exclusively by large chemical corporations, most of which are transnational corporations. One company alone accounted for 25 per cent of world production. That company, E. I. Dupont de Nemours and Co., in response to the dramatic evidence in 1988 that ozone depletion had already occurred over inhabited latitudes, announced it would support a complete phase-out of CFCs. The fact that one company can implement a global phase-out policy affecting 25 per cent of world production of such environmentally threatening chemicals underscores the importance of identifying the major industrial sources of environmental degradation and involving transnational corporations in remedial and preventative action. Subsequently, AT&T, General Motors, Northern Telecom, Nissan and other transnational corporations announced enterprise-wide plans to phase out CFCs in advance of agreed timetables. 4/ It is likely that such announcements had a positive impact on the intergovernmental negotiations for phasing out ozone-depleting chemicals.

8. Company policies setting targets for reducing greenhouse gas emissions will be significant in the light of the fact that transnational corporations play a central role in the extraction, refining and marketing of fossil fuels. Although resource and production facilities are about equally controlled between state-owned enterprises and transnational corporations, the latter are dominant in the control of technologies, transport, financing and downstream operations. The degree to which the automotive industry and the oil production industry cooperate in the design and marketing of more fuel efficient and less polluting vehicles could significantly lessen pollution and enhance the quality of life. 5/

9. Industrial chemical production, including the production of highly toxic chemicals, is largely in the hands of transnational corporations. The 20 largest pesticide manufacturers account for approximately 94 per cent of the world agrochemical sales in 1990. 6/ The nitrogen fertilizer industry is similarly concentrated. Thus, what chemical companies do with respect to health and safety standards for workers and consumers, emergency preparedness, waste minimization and the safe disposal of toxic chemicals is crucial.

10. Transnational corporations are also active in natural resource exploitation, such as in mining and metals production. In the aluminium industry, for example, six transnational corporations control 63 per cent of the mine capacity, 66 per cent of the refining capacity and 54 per cent of the smelting capacity. 7/ In general, the production of metals is highly energy-intensive. World wide, the production of aluminium, copper and iron, together, account for over 7 per cent of total global commercial energy use. 8/ The conservation, energy efficiency, recycling and waste management policies of these industries could significantly affect global warming and natural resource conservation efforts.

11. Because of their organizational and management structure, transnational corporations should be able to implement changes in industrial policies and practices relating to key environmental and developmental concerns throughout the enterprise. The top management of transnational corporations can provide the necessary policy mandates and reinforcement mechanisms to allow for the development of coherent policies and a common strategy for implementation throughout the enterprise. A corporate environmental policy incorporating developmental concerns, coupled with the intra-firm ability to share knowledge, resources and responsibilities, provides transnational corporations with the opportunity to play a leadership role in implementing uniform standards and policies globally, even ahead of changes in national or international law.

12. In addition, transnational corporations have the financial flexibility to raise investment capital and can distribute environmental research and development costs throughout the enterprise. They can allocate more resources for technological adaptation, environmental assessments and safety analysis. Transnational corporations also affect development through licensing agreements, bank lending and the impact of their investment on host country economies which provides employment, influences consumer spending and market development and provides training and industrial infrastructures. The table below indicates some of the ways in which the activities of transnational corporations can affect the environment in developing countries.

Ways in which the activities of transnational corporations can affect the environment in developing countries

Environment issues identified by the General Assembly in its resolution 44/228	Selected impacts being examined by the Centre's Benchmark Corporate Environmental Survey
Atmospheric protection	Does the company use CFCs or related products at their plant sites in developing countries? Does the company monitor its stacks for air emission components in developing countries?
Protection of freshwater resources	Are any of the company's plants located in the immediate vicinity of drinking water supplies in developing countries? Are any of the company's products particularly hazardous to drinking water supplies in developing countries?
Protection of oceans	Does the company release effluents into oceans or sea-water tributaries off developing countries?
Protection and management of land resources	Does the company hold land for safety zones in developing countries? Does the company have programmes for wetland and rain forest protection in developing countries?
Conversion of biological diversity	Does the company practise mono-cropping or clearcutting in developing countries? Is the company aware of any survey on biological species on its undeveloped land in developing countries?
Environmentally sound waste management of biotechnology	Does the company market any genetically engineered products in developing countries?
Environmentally sound waste management	Does the company have procedures for monitoring the disposal of hazardous waste generated in plants in developing countries?
Improvement of the urban and rural poor	Has the company made provisions for infrastructure, housing or services for its workforce in developing countries?
Protection of human health and control of toxic chemicals	Does the company have a toxic education programme for its workforce or for the surrounding communities in developing countries?

Source: United Nations Centre on Transnational Corporations, Benchmark Corporate Environmental Survey, (New York, 1990).

Note: The Centre is currently examining the development of transnational corporation policies; for further information, see report of the Secretary-General on transnational corporations and issues relating to the environment (E/C.10/1991/3/Add.1).

B. Specific responsibilities of transnational corporations

13. The international basis for addressing the specific responsibilities and contributions of transnational corporations has been evolving rapidly in recent years. In adopting the Environmental Perspective to the Year 2000 and Beyond, the General Assembly, at its forty-second session, noted that "transnational corporations should establish progressively in the host countries the skills and technological capabilities needed for environmentally sound management of industry, even in the absence of legislation on desirable environmental standards" (General Assembly resolution 42/186, annex, para. 47 (h)). At its forty-fourth session, the General Assembly, in section I of its resolution 44/228, stressed that large industrial enterprises, including transnational corporations, are frequently the repositories of scarce technical skills for the preservation and enhancement of the environment, that they conduct activities in sectors that have an impact on the environment and, to that extent, have specific responsibilities and that, in that context, efforts need to be encouraged and mobilized to protect and enhance the environment in all countries.

14. In addition, various international forums have addressed particular aspects of transnational corporation responsibility. For example, the draft code of conduct on transnational corporations addresses, inter alia, environmental information disclosure, restoration of environmental damage and testing practices for environmental safety. The Tripartite Declaration on Principles concerning Multinational Enterprises and Social Policy, adopted by the International Labour Organisation (ILO), addresses worker safety and health standards. The Organisation for Economic Co-operation and Development (OECD) is now completing policy guidelines that may address the responsibilities of multinational enterprises from OECD countries for accident prevention and emergency response in non-OECD industrial plant sites. While these are precedents, only the criteria for sustainable development management, a set of normative guidelines elaborated at the request of the Economic and Social Council, in its resolution 1989/25, thus far address explicitly the role of transnational corporation management in the area of environmental protection in the light of development.

15. Some transnational corporations and international trade associations have already begun to develop environmental management policies and programmes. Amoco, Beiersdorf Ag, Boise Cascade, Cargill, Caterpillar, BF Goodrich, Nobel Industries, Noranda Inc., Toyota and Volvo are among the transnational corporations that, in response to the Benchmark Corporate Environmental Survey, have indicated that they already have in place a company-wide environmental policy. The Chemical Manufacturers Association, as part of its continuing effort to improve the industry's responsible management of chemicals, has adopted a "responsible care" programme. 9/ The European Council of Chemical Manufacturers' Federations (CEFIC) has adopted Principles and Guidelines for the Safe Transfer of Technology, which "aim at ensuring that the degree of safety of new installations employing the transferred technology are of an internationally accepted level and equivalent to that achieved in the country of origin". 10/ The International Chamber of Commerce (ICC), in its brochure Sustainable Development, The Business Approach, states that "business needs to be ready for new approaches to economics. For relatively modest investments of time and money there is a chance to contribute to the process and

ensure future success in this new framework [of sustainable development]". 11/ ICC is currently preparing a "business charter for sustainable development, principles for environmental management", which will be considered for adoption at the second World Industry Conference on Environment Management, to be held at Rotterdam in April 1991.

16. While these developments indicate a growing willingness on the part of some leading companies to contribute to sustainable development, there is a continuing need for Governments to formulate standards. Competitive self-interest, free-rider firms, the lack of a level playing field and the inability of trade associations to enforce voluntary standards on their membership, render exclusively voluntary efforts inadequate. Voluntary efforts can complement international standards but cannot replace them. Such issues as transboundary environmental effects, the impact of chemicals on international trade, international waste dumping, the transfer of environmentally sound technologies, and additional financial resources, might particularly lend themselves to intergovernmental measures.

17. The present report is divided into five sections reflecting the developmental objectives set for the 1992 United Nations Conference on Environment and Development. The Commission on Transnational Corporations could consider making recommendations on the preparatory process for the Conference in the following development-oriented areas:

(a) Internationally agreed standards and instruments. The Conference agenda calls for the further development of international environmental law and a supportive international economic environment for arriving at specific agreements and commitments on major global environmental issues and other strategies that would result in sustained and environmentally sound development in all countries (General Assembly resolution 44/228, sect. I, para. 15 (d), (g) and (i));

(b) Transfer of environmentally sound technologies to developing countries. The Conference agenda calls for the development and implementation of effective modalities for favourable access to, and transfer of, environmentally sound technologies to developing countries (General Assembly resolution 44/228, sect. I, para. 15 (m));

(c) International environmental management. The Conference agenda calls for the identification of strategies that incorporate environmental concerns into the economic and social development process, particularly examining the state of the environment, and clearly identifying and analysing the sources of environmental degradation and appropriate preventive and remedial actions (General Assembly resolution 44/228, sect. I, para. 15 (a), (b), (c), (n) and (o));

(d) Prevention of environmental deterioration. The Conference agenda calls for international strategies of technical cooperation to prevent further environmental deterioration and combat pollution, hazardous wastes and toxic chemicals, through the assessment and anticipation of environmental risks, accidents and emergencies, the analysis and monitoring of environmental problems, and through awareness-building (General Assembly resolution 44/228, sect. I, para. 15 (f), (n), (o), (p), (s) and (t));

(e) Additional supportive measures. The Conference agenda seeks to identify ways and means of providing new and additional financial resources, including the consideration of various funding mechanisms, which would expand expertise and technological capacity for environmental protection and environmentally sound development, particularly in developing countries (General Assembly resolution 44/228, sect. I, para. 15 (h) (j), (k), (l) and (t)).

I. INTERNATIONALLY AGREED STANDARDS AND INSTRUMENTS

18. There is a growing consensus that unilateral action by individual Governments will be ineffective in addressing a number of major global as well as local environmental issues. This international concern about environmental issues has been reflected in an increasing number of international policy declarations, resolutions, decisions, guidelines, codes of conduct and conventions on the environment. These internationally agreed upon standards and policies are creating a new body of international law and norms designed to cope more effectively with the interdependence of environment and development issues.

19. Some international guidelines addressing environmental issues are in the form of resolutions or other non-binding agreements. Although such non-legally binding instruments are not enforceable, they represent internationally endorsed minimum standards. Other agreements are in the form of conventions or treaties that impose clear obligations on the parties to those agreements. When these standards are embodied in implementing legislation at the national level - as they are expected to be - transnational corporations operating in those countries have a legal obligation to comply. Although transnational corporations operate internationally, they cannot become parties to agreements concluded by member States. However, it can be argued that when the activities of transnational corporations affect the environmental concerns addressed by the terms of environmental policy instruments, they have a responsibility to ensure that their activities conform to the spirit and intent of the provisions of those instruments, in the light of the fact that such instruments represent an international consensus on minimum standards of behaviour.

20. One way of dealing with the responsibilities of industry, large enterprises and/or transnational corporations is to address expressly the responsibilities and policies that should be followed in the instrument. These instruments could identify the responsibilities of the corporate sector for specific environmental protection practices. Within the scope of the current negotiations on climate change, biotechnology and biodiversity, for example, it would be possible to address the specific responsibilities of industrial firms and transnational corporations.

A. International agreements addressing industry and transnational corporations

21. There are two recent international agreements that explicitly address the responsibilities of industry, including transnational corporations: the International Code of Conduct on the Distribution and Use of Pesticides, adopted by the Food and Agriculture Organization of the United Nations (FAO), 12/ and the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (see UNEP/IG.80/3).

22. The FAO Code was designed to protect people from pesticide poisoning, which remains a significant health and environment problem, particularly in developing countries. Each section of the FAO Code distinguishes the particular responsibilities of Government and the particular responsibilities of the pesticides industry. The Code was drafted with the active participation of industry, non-governmental citizen organizations and Governments. The international pesticides industry has agreed, through its international agrochemical manufacturers association, to comply with the Code. 13/ As a result, some companies have issued reports with respect to their activities related to the Code, but most have not. While it is the intent of the Code that Governments enact pesticide control legislation, in the absence of legislation the Code is voluntary; therefore, public reporting and the resulting voluntary changes in practices are the only practical implementation mechanisms. Thus, independent monitoring of deviations from Code policies could increase the effectiveness of the voluntary Code and enhance its objective in preventing pesticide poisoning, particularly in those host countries without effective pesticide regulatory authorities.

23. The Basel Convention will enter into force upon ratification by 20 States. At that time, industry, as one of the "generators" of waste, will be legally bound in those States that have ratified the Convention. The aim of the Convention is to establish control measures that would lead to reductions in the generation of hazardous waste and to transboundary movements of such wastes. Such movements are permitted only when the receiving site is equally or more environmentally safe for transport and disposal of waste than in the country of waste generation. The receiving State must consent to receive each shipment of waste.

24. In accordance with the intent of the Convention, industry should reduce the amount of waste generated by its activities. Provisions in the Basel Convention require, inter alia, the environmentally sound on-site disposal of wastes in all countries that are parties to the Convention. If this is implemented, there should be little need for transnational corporations to engage in the transboundary movement of wastes from their operations. When such movements do occur, transnational corporations should ensure that the proper notification and permits have taken place and that the waste facility meets the standards required by the Convention.

25. In addition to the Basel Convention, regional agreements are restricting the transboundary movements of hazardous wastes. The Fourth Lomé Convention (which governs relations between the European Community and associated States in Africa, the Caribbean and the Pacific, signed on 15 December 1989, prohibits the export of

hazardous waste from the countries members of the European Community to those developing countries. 14/ The Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa, adopted on 29 January 1991, would bind countries to take action to prohibit the import into Africa of all hazardous wastes from non-African countries. 15/ The Bamako Convention, like the Basel Convention, specifically addressed "generators" of hazardous wastes.

B. International agreements that imply responsibilities for transnational corporations

26. The Vienna Convention for the Protection of the Ozone Layer came into force on 22 September 1988 and the Montreal Protocol on Substances that Deplete the Ozone Layer on 1 January 1989. Subsequent amendments to the Montreal Protocol set the year 2000 as the target date for the phasing out of CFCs and halons and 2005 as the target date for the phasing out of carbon tetrachloride. As stated in paragraph 8 above, CFCs have been produced almost exclusively by large chemical transnational corporations. Transnational corporations are also heavily involved in the intermediate consumption of CFCs in refrigeration systems and automotive air-conditioning and as solvents in the electronics industry. While initially resistant to measures to regulate ozone-depleting chemicals, almost all the major user groups have announced joint research and development efforts on alternatives. Thus, corporations have shown that, in the face of impending international regulation, they can effectively develop technological alternatives. 16/

27. What transnational corporations do to support the goals and objectives of the Montreal Protocol is crucial. Despite the fact that transnational corporations might wish to reap short-term market advantage in countries that are not parties to the Protocol the participation of transnational corporations in the production, investment or licensing of CFC-containing products in such situations would undermine the rationale for the Protocol. Finally, transnational corporations could further the objectives of the Montreal Protocol by actively participating in the transfer of non-ozone-depleting technologies at affordable prices to developing countries.

28. The London Guidelines for the Exchange of Information on Chemicals in International Trade, adopted by the Governing Council of the United Nations Environment Programme (UNEP) in 1987, are aimed at helping Governments, particularly developing country Governments, avoid serious and costly health and environmental problems owing to ignorance of the risks associated with the use of chemicals, particularly those that have been banned or severely restricted in other States. 17/ The Guidelines call for the exchange of information on chemicals to protect against environmental and health hazards, notification of control actions by Governments and information disclosure, including packaging and labelling policies. By 1986, more than 500 chemicals had been banned or severely restricted in their countries of origin. The vast majority of those chemicals are manufactured and marketed by transnational corporations. 18/

29. Transnational corporations could be expected to assist Governments in fulfilling their obligations under the London Guidelines by providing information to the designated national authorities in the host countries in which they operate. International shipments of banned or restricted chemicals, including the intra-firm transfer of such compounds, should not take place without implementation of the prior informed consent procedures of the London Guidelines and without a complete dossier on the latest scientific and regulatory data being made available to customers, particularly those in developing countries.

C. New international agreements affecting transnational corporations

30. In 1981, UNEP sponsored an expert group which recommended to the Governing Council a specific future agenda for the development of international environment law. 19/ An updated agenda may be expected to emerge from the United Nations Conference on Environment and Development, to be held in 1992. Some of the specific transnational corporation themes addressed in the present report might be appropriately considered for new binding international agreements. In addition, the agreements currently under negotiation could stipulate the specific responsibilities of large enterprises, particularly transnational corporations.

31. At the present time, an international code of conduct on safety in biotechnology is being prepared under the auspices of a working group consisting of representatives of the United Nations Industrial Development Organization (UNIDO), UNEP, the World Health Organization (WHO) and FAO. While biotechnological developments were initially the product of small specialized high-technology firms, the trend is now towards increased control of biotechnology and genetic engineering by transnational corporations. Moreover, the technologies that were transferred to developing countries were largely in the public domain, such as high-yielding crops. The increased privatization and commercialization appears to be raising issues concerning ownership rights, patent rights, farmers' rights, protection of genetic resources, and access and transfer. 20/

32. While enterprise-wide environment and health protection policies on biotechnology could and should be undertaken voluntarily at the present time, it is clear that it would be useful for the biotechnology code of conduct to address expressly the role of industry, including transnational corporations and to define their specific responsibilities in this area of growing importance. Code provisions relating to the activities of transnational corporations could address such concerns as:

(a) The extent to which genetically engineered products will replace natural products that developing countries depend upon for economic growth;

(b) The necessity of taking care that research and development efforts do not focus on the products and processes that would be detrimental to sustainable development efforts in developing countries;

(c) The development of internationally agreed standards for the field-testing of genetically engineered organisms and plants for transboundary application;

(d) The implementation of equally high testing standards in developing countries as in industrialized countries, being mindful not to exploit for market advantage the fact that certain practices that are unacceptable may not be forbidden in all countries;

(e) The uniform disclosure of information to the appropriate host government authorities, to the concerned public and to the relevant international agency or organization, about genetically altered products and processes.

33. The forthcoming framework convention on climate change will be far more difficult to negotiate and implement than the Vienna Convention and the Montreal Protocol. Whereas CFC production is concentrated in a handful of companies and relates to a narrow range of industrial processes, the industrial activities that generate greenhouse gases touch almost every aspect of industrial society. As mentioned above, transnational corporations dominate the six major industrial sectors that contribute to greenhouse gas generation and climate change: fossil fuel production, transportation, electricity generation, energy-intensive metals production, inorganic nitrogen fertilizers and the CFC industry. 21/ If the agreements reached are to truly reduce greenhouse gases, then the activities of most of the major transnational corporations in the world would be affected.

34. It is likely that one result of an agreement on climate change will be the setting of targets for the reduction of greenhouse gas generating emissions. While these targets may be national targets, it is not clear at this time whether targets will also be set for specific industries or particular industrial processes. With the convention in force, transnational corporations can be reasonably expected to take steps to conform their practices to the spirit and requirements of the convention. This would mean, for example, that investment decisions should not thwart carbon dioxide reduction targets, and differences among States on how reduction targets are implemented should not be exploited for short-term market gains. For example, one Government might require reductions for a specific industrial sector, whereas another Government might not. These differences should not be used as the basis for moving production facilities or not implementing reduction practices. A commitment at the highest corporate level would be crucial for mandating an evaluation of the available strategies for reducing emissions and conserving energy, as well as for studying the potential impacts of global warming and the rising oceans on corporate activities, both necessities for informed policy development. In this way, forward-looking management will be able to identify future markets, new products and new investments to replace activities that will need to be phased out and/or to compensate for the costs associated with retooling production facilities, replacing greenhouse gas generating technologies, and developing alternative energy sources.

35. The framework convention on climate change could include general principles for large enterprises and transnational corporations, such as the obligation not to exploit differences among States on how reduction targets are implemented for short-term market gains, or it could state the stewardship responsibilities of

transnational corporations in the light of their use of the global commons, the atmosphere. The convention could also include criteria for the reduction and stabilization of emissions across plants, enterprise-wide goals for phasing out greenhouse gas emitting technologies and responsibilities vis à vis intra-firm transfers of cleaner technologies. The agreement could identify industry-specific policies for international application for the major transnational corporation sectors that generate greenhouse gases, such as transportation, production of energy-intensive metals (aluminium, copper, iron etc.) and fossil fuel production.

36. Most international agreements on the environment have not yet included provisions on transboundary activities of large enterprises. In the long run, however, transnational corporations will benefit from international policies that provide a level playing field for their activities. Perhaps it should be seen that the price of doing business outside the reach of national boundaries is the agreement to abide by international policies for environmental protection and preservation. Regardless of the legal form of an international environmental instrument, once the policies, standards and requirements are accepted through intergovernmental negotiations by the majority of the countries of the world, transnational corporations should be expected to conduct their activities in ways that support the spirit and letter of international law and do not exploit differences that may arise from their uneven application.

II. TRANSFER OF ENVIRONMENTALLY SOUHD TECHNOLOGIES TO DEVELOPING COUNTRIES

37. In the pursuit of sustainable development, developing countries need both increased access to existing environmentally sound technologies to ameliorate current pollution problems and new environmentally sound technologies for use in future investments. Existing technologies include those readily available and even taken for granted in the developed world, such as the availability of unleaded gasoline, water purification systems, scrubbers and filters for factory smokestacks, and environmental monitoring equipment. Given the dissatisfaction with the current levels and types of technology transfer, new and innovative, even boldly unconventional and often voluntary acts of environmental responsibility, on the part of all actors involved, must be envisaged if progress in this area is to be obtained in the near term. It can be argued that environment and development stakes relating to technology transfer place an added moral duty on all actors that possess the power to implement effective solutions to act responsibly and quickly.

38. The transfer of environmentally sound technologies and information that enhance the ability of developing countries to process, and thus add value to, domestically produced commodities can significantly benefit the environment. By enabling those countries to earn more foreign exchange for a given volume of commodity produced or extracted, value-added processing reduces the economic pressures driving the non-sustainable exploitation of natural resources and agricultural lands. It can also result in a proportional reduction of any deleterious environmental impacts associated with the production or extraction process.

39. The General Assembly, in its resolution 42/186, adopted the Environmental Perspective to the Year 2000 and Beyond, contained in the annex to that resolution. It expressed concern about technology-related issues in the sections on food and agriculture, energy, bio-technology, international economic relations and industry. The section on industry makes specific recommendations to support "the transfer of industrial technology and skills from developed to developing countries to arrest environmental degradation associated with industry [and to promote] access of the developing countries to information and data on environmentally benign technologies" (para. 47 (a) and (k)). It also recommended that the transfer of clean, low-waste and pollution control technologies be promoted through international cooperation and that the possibility of making such technologies available at concessional prices to the countries in need be explored (para. 68 (j)).

40. Two years later, at its forty-fourth session, the General Assembly emphasized the crucial role of favourable access to environmentally sound technologies by developing countries in the preparation for the United Nations Conference on Environment and Development (resolution 44/228, para. 15 (m)). Subsequently, the Preparatory Committee for the Conference requested a study that would, inter alia, elucidate the concept of environmentally sound technology and clarify the process by which technology is transferred, examine the obstacles, on both the exporting and importing sides, that impede the transfer of environmentally sound technology and further examine what new mechanisms are needed and their financial implications. 22/

41. To assist in these deliberations, the Centre is undertaking a research project that analyses the barriers to and possible structures that could be used to increase the flow of environmentally sound technologies to developing countries on mutually beneficial terms. The project studies a number of economic mechanisms that could help reduce the barriers to the transfer, use and further development of environmentally sound technologies. These mechanisms include those that generate new sources of global revenue, as well as those that utilize market mechanisms, trade and investment agreements, national regulatory systems, tax and tariff systems and development assistance. The specific mechanisms studied under the first group, for example, are tradable and leasable pollution permits, greenhouse or carbon taxes and offset agreements (see E/C.10/1991/3/Add.1. for additional details).

42. If the mechanism of pollution permits were implemented, they would provide incentives for Governments and firms to fulfil emission-reduction targets set in international environmental agreements. Under a system of internationally tradable or leasable pollution permits, countries that were below the recognized international standards could market future pollution rights to countries that exceeded international standards. As most industrialized countries would likely be in excess of an international standard, developing countries are seen as potential beneficiaries of an international pollution permit system. Transnational corporations with affiliates that operate in both developed and developing countries could be in a position to trade or lease permits on an intra-firm basis. Since the mechanism could conceivably generate a significant amount of revenue, it could directly benefit the transfer of environmentally sound technologies through

the allocation of these new revenues to finance the purchase of environmentally sound technology or cover the related costs of local research and training in the operation of an environmentally sound technology.

43. In this respect, the United Nations Conference on Environment and Development could consider, inter alia, at least three specific transnational corporation aspects of the technology transfer issue: (a) intra-company access to environmentally sound technologies, (b) intra-firm participation in the environmentally sound technology research and development projects and (c) access by developing country companies to environmentally sound technologies owned by transnational corporation affiliates in developing countries.

44. Since the majority of transnational corporations are based in developed countries where more elaborate environmental regulations have been in effect, their developed country operations have been correspondingly adapted to satisfy both environmental regulations and public expectations. The result is the design and application of environmentally sounder versions of technologies to conform to the higher standards in these markets. Although many of these technologies are end-of pipe solutions and do not fully address a long-term sustainable development imperative, they have improved environmental conditions in the developed countries.

45. As noted earlier, Governments have agreed in the General Assembly that transnational corporations ought to implement home country requirements and regulations in host country operations even when the host country lacks such regulations and standards. When, for example, transnational corporations are subject to severe restrictions on DDT, asbestos or benzidine dyes in their home-country, they could be expected to refrain from producing and using such products in other countries even when there could be considerable short-term gains to be made through the temporary comparative advantage that the lack of regulation creates. Safe, alternative technologies equivalent to those placed in service in the home country could be transferred. The difference in regulations and standards among countries has often come about because of the varying costs and benefits for different countries. In any case, the adoption of environmentally sound practices and technologies in all countries would ultimately be conducive to long-term business objectives.

46. Carrying out a corporate-wide intra-firm policy to promote the rapid growth of transfers of environmentally sound technologies between transnational corporation home-base companies and affiliates in developing countries necessitates new structures. A well-established information system on internally available technologies and a mechanism for effectively monitoring the use of those technologies should be minimum prerequisites for an enterprise-wide programme in this area. Another component of the information system could be used to coordinate the implementation of procedures for handling hazardous substances and production processes across national borders. These procedures could be initiated with the understanding that they would be adjusted to the social, ecological and political realities of host country markets.

47. The information system could also facilitate exchanges between home country units and their affiliates on issues that affiliate management considers may

require expensive environmental research and development and to transmit environmental health and safety information discovered in one part of the enterprise to other units and associated companies throughout the enterprise. For example, when a transnational corporation headquarters research station discovers an unexpected hazardous effect of a product or process, such as evidence of potential carcinogenicity, this information could be made available on a priority basis with appropriate recommendations and precautions to be taken throughout the company's global structure.

48. Transnational corporation affiliates could ensure the local mastery of technologies by providing education and training at all levels of the enterprise, and extend this training to its customers in host countries. Affiliates in developing countries should participate in research and development cooperation programmes, not only with other parts of the corporation, but also with local academic and research institutions. A transnational corporation affiliate, for example, could be instructed to commission a local university to perform a research and development task related to environmentally sound technology use rather than requesting the work from the home-based research centre.

III. INTERNATIONAL ENVIRONMENTAL MANAGEMENT

49. As the criteria for sustainable development management indicate, there is a range of new managerial choices for executives of transnational corporations as they integrate environmental and development concerns into their business culture and organizational system. To operate a sustainable development-oriented business plan effectively, transnational corporations have to articulate a clear corporate policy, maintain an institutional structure to carry out that policy and operate a sophisticated reporting system.

A. Corporate world-wide policy

50. Comprehensive environment and development policies need to apply throughout the world wherever the company has investments, licensees or partners. It is important to ensure that headquarters' policies in the working languages of the local enterprises are effectively conveyed to all operations, particularly if the local environmental regulations in the host country are weaker than in the headquarters country. Transnational corporations can play a significant role in improving general environmental conditions by requiring their business affiliates and contractors to adhere to the same standards they set for themselves. 23/ High company standards could lift environmental performance to the level of the best practice world wide.

51. The implementation of environmental policies of transnational corporations may require particular structures and mechanisms in order to be effective. These include an environment unit in the headquarters of the corporation, clear lines of accountability that lead directly from managers overseeing environmental performance to the appropriate corporate authority such as the office of chief executive officer or the board of directors, and a modification of corporate

culture to inculcate the idea of environmental accountability into the full workforce. A clearly identified locus for the central environmental function is important for maximum effectiveness and response capability. It can facilitate communication with relevant management officials and coordinate disclosure to competent government agencies and appropriate public institutions. The central unit can also be assigned to oversee a variety of functions in the supervision of environmental performance. Some of the mechanisms in use by the leading environmentally sensitive transnational corporations include the following:

(a) Pollution monitoring techniques;

(b) Environmental audit procedures;

(c) Environmental impact assessment procedures;

(d) Waste handling procedures;

(e) Safety audit procedures;

(f) Hazard assessment procedures;

(g) Accident prevention plans;

(h) Emergency response systems;

(i) Worker safety training programmes;

(j) Management safety training programme;

(k) Energy conservation standards;

(l) Internal green labelling;

(m) Environmental accounting;

(n) Workers' participation in setting up health, safety and environment committee;

(o) Community participation in emergency planning;

(p) Annual meeting between headquarters and local environment officials. 24/

B. Environment and development impact assessment

52. Effective international sustainable development management requires at the minimum that senior corporate managers and competent government officials are well informed about the prospective environment and development consequences of the activities of the firm. The need to assess in advance the likely environmental impacts of new large projects is generally required in industrialized

countries. 25/ The European Commission, for example, has directed that "Member States shall adopt all measures necessary to ensure that, before consent is given, projects likely to have significant effects on the environment by virtue of, inter alia, their nature, size or location are made subject to an assessment with regard to their effects". 26/ Although the form of disclosure may differ, other industrialized countries require environmental impact assessments for projects likely to seriously affect the environment.

53. Environmental impact assessments usually include the foreseeable impacts of a project on air and water quality, waste management and disposal, fish and wildlife habitat, health and safety issues and demands on local transportation systems, sewage systems and other infrastructure demands. While environmental impact assessments are common practice in industrialized countries, they remain uncommon in developing countries.

54. In developing countries, development criteria such as import of capital, transfer of technology, number and kinds of jobs created or lost, increased exports, development of infrastructure such as roads, ports and communications, impact upon local industry, and training and education of the work force have traditionally been used in assessing the validity of foreign investment. The World Commission on Environment and Development stated that "environmental objectives must be built into taxation, prior approval procedures for investment and technology choice, foreign trade incentives, and all components of development policy". 27/ The World Commission also argued that environmental impact assessments of new investments should be broadened to include sustainable development criteria. 28/

55. The task of developing an environment and development impact assessment is not an easy one. The history of developing environmental impact assessments, with all the different forms that they take to suit the requirements set out by various agencies in industrialized countries, points to the difficulties that will be encountered in creating this new model. The task of assessing environment and development impacts would be facilitated and made more effective by the use of a single comprehensive disclosure policy for transnational corporations, setting out in totality what information is required. In developing countries, where such disclosure practices are absent, the utility of uniform specifications for environment and development impact assessment is evident. 29/

56. The following criteria set out some of the topics that could, as a first step, be included in environment and development impact assessments:

(a) Whether the industrial activity contributes to the overall diversification and strength of the local economy;

(b) The extent to which the activity either preserves or threatens biodiversity;

(c) The extent to which the facility intends to use common public resources and how it will conserve such resources;

(d) The possibilities for utilizing renewable resources rather than depleting non-renewable resources in the facility;

(e) Whether adequate technological risk assessments have been made, particularly for those products and processes that could have major effects on the social and natural environment;

(f) Whether the technologies used in the facility are compatible with the needs and skills of the local region;

(g) Whether the local government and local community have been included in accident preparedness planning;

(h) Whether an evaluation has been made regarding the acquisition of environmentally sound technologies from local manufacturers.

57. The adoption by corporations of environment and development impact assessments for new project sites would constitute a significant contribution to the goals of the United Nations Conference on Environment and Development such as protection of the atmosphere, freshwater and ocean resources, land, biodiversity, and human health and the working environment of the poor. Transnational corporations have often incorporated some developmental concerns in their investment decisions in developing countries. These development concerns have generally not addressed environmental and natural resource depletion questions. A start towards sustainability could be made if Governments began examining foreign investment projects on the basis of some of the criteria set out above.

C. State of environment and development reporting

58. Environmental reporting is an essential tool in determining the strategies for transforming existing operations into fully sustainable operations. Environment and development reporting is retrospective and evaluative as compared with environmental and development impact assessments that are prospective, generating information related to future projects. The techniques for environmental reporting are diverse and growing. These include environmental audits, environmental financial statements, natural resource accounting and systems mandating data disclosure reports on such subjects as emissions, waste and accidents.

59. The information gathered as part of the disclosure requirements of environment and development reporting should optimally be used both internally for management decision-making and externally so that the relevant public, such as Governments (national and local), the community at risk and workers, can use the information for their own policy planning and for cooperative efforts with transnational corporate management.

60. Many transnational corporations have been collecting environmental data and monitoring their own operations and impacts. But, without deeper commitment to gathering data related to sustainability goals (such as the amount of wasted natural resources or energy underutilized in a production process), companies will

not be in a position to set new goals and strategies to meet them (such as knowing where a new technology is needed to conserve energy and limit emissions).

61. A standardized environment and development report could assess the corporation's environmental performance and analyse and monitor current and potential environmental problems. It could include an assessment of company-wide progress towards sustainable economic activity, focusing on the impact of investment decisions, resource conservation and efficiency, waste minimization, education and training of the workforce, research and development, transfer of environmentally sound technologies and economic impact in host developing countries. 30/ The publication of an environment and development global report by transnational corporations would contribute to the objectives of the United Nations Conference on Environment and Development "to examine the state of the environment and changes that have occurred" and "to promote open and timely exchange of information on national environmental policies, situations and accidents" (General Assembly resolution 44/228, para. 15 (a) and (p)).

62. To prepare a standardized environment and development report, corporate executives need to use a method of environmental auditing to keep themselves accurately informed of the environmental consequences of their firm's activities. At the same time, corporations need a revamped environmentally sensitive accounting system to measure properly the financial consequences of their environmental practices.

63. An environmental audit is "a systematic examination of performance during the operational phase of industrial activity to ensure compliance with requirements, as distinct from an environmental impact assessment which takes place in the planning phase before an operation starts". 31/ The World Commission on Environment and Development sought explicit use of environmental audits for both home and host company operations:

> "The transnationals should also institute environmental and safety audits of their plants measured against standards at other subsidiaries, not just against those of other local companies, which may have less stringent requirements. These audits and their follow-up should be made available to governments and other interested parties." 32/

64. Environmental auditing has become a central feature of environmental management. There is an emerging consensus among industrialists, particularly in North America, Europe and Scandinavia, that the preparation of environmental audits is increasingly essential, because companies that fail to audit the environmental performance of their plants, processes and products on a regular basis will find that it almost inevitably deteriorates. 33/ Systematic and company-wide environmental audits now exist at perhaps a third of the Fortune 500 largest companies, including Allied Signal, 3M, DuPont, General Electric and Volvo. Management consultancy firms such as Arthur D. Little and Booz Allen, in the United States, and Aspinwall & Company Ltd and the Centre for Environmental Management and Planning, in the United Kingdom, have devised procedures for environmental audits which are being used by various transnational corporations. Nevertheless, it is still the case that in the majority of corporations, environmental audits are

inadequate, or absent altogether. Moreover, special environmental auditing procedures may be needed in countries that lack extensive legal reporting requirements on environmental performance.

65. Company financial statements usually contain little or no information on annual environmental expenditures or on environmental liabilities. Only a few transnational corporations itemize their environmental expenditures as a percentage of their total investments. Others state it is impossible to determine the extent to which expenditures either benefit the environment or create liabilities. 34/ However, given the recent enormous costs of clean-up and liabilities for environmental damage, a financial assessment of environmental performance is arguably as important as the assessment of a corporation's overall financial health.

66. Governments and companies alike are trapped in national and corporate accounting systems that were developed when environmental issues were not an important consideration. It has now become clear that existing accounting systems and methods do not adequately disclose or measure the value of natural resources and environmental services. Common public resources that are not owned are degraded without any attention paid to the loss incurred. In the interest of short-term profits and in the absence of legal requirements, privately owned resources are optimally depleted according to market opportunities but not according to a policy that takes into account the preservation of global reserves.

67. In addition, some other environmental costs (present and future) are borne by society. If enterprises were to internalize these costs, their profit and loss situation could change significantly. There are currently no accepted methods whereby these external costs can be reflected in financial statements - even in the hypothetical case where an enterprise would agree to or would be forced to pay these external costs. The United Nations Centre on Transnational Corporations is in the process of designing prototype financial statements for corporations so that they can account for and report their income and profits on a "sustainable" basis. The main challenge is to develop an acceptable valuation method for quantifying the unrecorded costs of non-sustainable economic activity. This requires that asset and liability boundaries be redefined to include quantifying the extent of resource depletion and degradation due to an enterprise's activities.

IV. PREVENTION OF ENVIRONMENTAL DETERIORATION

68. Every production process, activity or product has potential impacts on the environment, health and safety. What varies is the degree to which the product or process can pose a risk or actually present a hazard to the environment and the health and safety of workers, surrounding communities or consumers. During the past 20 years or so, international technical standards and practices have evolved for risk assessment and methodologies for the minimization or mitigation of hazards and for the prevention of serious accidents and the minimization of their consequences. These standards are sometimes expressed in regional or international agreements, in national law, in the technical standards and practices developed by engineering and industry associations and in the policy positions promulgated by international organizations. For example, UNEP, FAO, UNIDO, and WHO have published technical safety guidelines and manuals.

69. In 1977, the International Labour Organisation, in its Tripartite Declaration on Principles concerning Multinational Enterprises and Social Policy, stated that "multinational enterprises should maintain the highest standards of safety and health, in conformity with national requirements, bearing in mind their relevant experience within the enterprise as a whole, including any knowledge of special hazards". 35/

70. In 1987, the World Commission on Environment and Development stated that large industrial corporations, particularly transnational corporations, "should adopt the highest safety and health protection standards practicable and assume responsibility for safe plant and process design and for staff training". 36/

71. In 1989, the Ministers at an OECD Conference on Accidents Involving Hazardous Substances adopted a concluding statement articulating the principle that all parties concerned should promote a level of safety for hazardous installations in developing countries equivalent to that for similar installations in OECD countries. 37/

72. In most industrialized countries, enterprises must provide notification of risk in the construction and operation of facilities and must report the presence of toxic or volatile materials and the occurrence of spills, accidents and worker injuries. Some Governments require that this information be made available to the public. 38/ Most industrialized countries also require that potentially harmful products be approved before sold to the public, and approval requires notification of risks involved. Most developing countries in which transnational corporations operate, however, lack environmental laws and regulations as stringent as those in the industrialized countries. Even where the legal framework exists, implementation and enforcement is often ineffective because of the lack of resources for training, equipment and staff.

73. These regulatory schemes, coupled with technical support from industry associations, means that transnational corporations have access to advanced methodologies for assessment and notification of occupational health and safety risks associated with the use of hazardous products, processes or materials in facility operations, plant construction and raw material extraction. Since transnational corporations utilize these methodologies and procedures in industrialized countries, and obviously have the environmental scientific staff and technical skill, they should be able to extend this knowledge to all countries in which they operate and sell products. This means, among other things, the maintenance of consistent and complete environmental, health and safety information for all products and processes. There should be special warnings and labels, particularly in developing countries, for highly toxic or severely restricted products or processes, unless explicitly instructed otherwise by national laws or regulations.

74. A transnational corporation can establish technical requirements for equivalent levels of risk and safety for high-hazard products and processes that would be adhered to by the entire corporation throughout the enterprise. For example, there are certain processes and products, such as those involving explosives, asbestos of polychlorinated biphenyl (PCBs), that are extremely dangerous in any quantity and in any environment. A transnational corporation could have requirements pertaining to the use and handling of such products and

processes when local legislation is not sufficient to maintain a uniform high standard throughout the enterprise. Whenever this is necessary, corporations should insist that contractors demonstrate the necessary technical competence and maintain equivalent high levels of performance and integrity for high-hazard products, processes and wastes.

75. Given the diverse conditions facing transnational corporations operating in different socio-cultural and physical environments, however, it might not be possible for them to adopt a completely uniform approach to the technical implementation of their environment, health and safety standards throughout the enterprise. For some activities, headquarters can issue instructions to local management that may need to be adapted to local conditions. Subsidiaries should inform headquarters of any modifications they have had to make to safety instructions that may have been necessitated by social factors, technical differences, location, environment and waste disposal requirements so that they achieve equivalent levels of health and safety.

76. Finally, transnational corporations can produce guidance documents to inform local managers about all aspects of health and safety risks involved in the enterprise's operations. These should include information that local managers can use to limit and bring under control the consequences of out-of-the-ordinary incidents.

77. Labelling standards should also apply in intra-firm exchanges of toxic substances that are used either in production processes or by agricultural workers. This is particularly important in developing countries where hazards to workers in chemical facilities or from agrochemicals is particularly problematic. The FAO Code of Conduct on the Distribution and Use of Pesticides provides a model that could be extended to all chemicals. It includes warnings in appropriate languages, the use of symbols and pictograms, clear identification and dating of each batch of chemicals and storage instructions.

78. Transnational corporations, as a result of increased regulation and industry initiative in industrialized countries, have knowledge of and expertise in procedures for assessment and notification of risk, emergency preparedness and overall safety standards. Some companies do apply equivalent environmental standards in all the countries in which they operate. By establishing an equivalent level of risk and safety standards transnational corporations can also further the development goal of the United Nations Conference on Environment and Development of strengthening the capacity of developing countries for identifying, analysing, monitoring, managing or preventing environmental problems.

V. ADDITIONAL SUPPORTIVE MEASURES

A. Innovative financing to promote sustainable development

79. It is generally accepted that most developing countries will not be able to self-finance a transition to environmentally sustainable development owing to burgeoning populations, fluctuating commodity prices, high debt service

obligations, stagnant official development assistance and net capital outflows. Without a massive increase in external assistance, most projections paint a bleak picture of continuing economic stagnation, deepening poverty and accelerating environmental destruction in many parts of the developing world. The effects will be felt both locally and globally, the latter via global warming, loss of biological diversity and natural resource deterioration.

80. A variety of innovative proposals about revenue generation for sustainable development have emerged. 39/ The report of the World Commission on Environment and Development pinpointed "automatic" revenue sources such as monies derived from the use of the international commons and taxes on international trade. Numerous burden-sharing environmental tax, clearinghouse or levy schemes on a global level have been proposed, including a "planet protection fund" (proposed at the Ninth Summit of the Non-Aligned Movement), an "international fund for the atmosphere" (advanced by Norway), a "biodiversity fund" (envisaged as part of the proposed biodiversity convention), and a "global environmental trust fund" (financed by levies on greenhouse gases, suggested by the International Conservation Financing Project).

81. The Centre began examining the feasibility of a corporate fund for international environmental protection in developing countries at the request of the Economic and Social Council. The fund could attract, mobilize and direct capital resources to qualified projects or entities in developing countries in the following tripartite manner: (a) a fund for non-profit corporate contributions would consist of voluntary and in-kind corporate contributions and would be designed to make private sector resources available for projects in the developing world that meet sustainable development criteria; (b) a for-profit venture capital fund would support the growth and development of commercially viable environmental efforts in the developing world and augment the resources of the first fund; this fund could be organized and managed as a standard for-profit venture capital fund; (c) a for-profit mutual equity fund would reward and encourage corporate environmental responsibility of more established enterprises and provide financial resources for the operations of the non-profit window.

82. Along with tax and project financing, a variety of other resource transfer mechanisms might also be expanded. These could include, for example, increased availability of funding for purchase and conversion of discounted debt to support larger "debt-for-nature" programmes, along with broad-based debt restructuring or retirement schemes with strong environmental conservation or other sustainable development provisions. 40/ Alternatively, revenues from an international greenhouse gas tax could be used by a developing country to compensate patent holders of environmentally sound technologies needed by enterprises within the country, or revenue from a global carbon tax could be used to finance the conversion of a major industrial sector in a developing country to a higher energy-efficiency regime.

83. Most developing countries can neither afford nor be expected to make the transition to sustainable development unless they gain access to additional financial resources and technologies in which transnational corporations are chief repositories. Transnational corporate and bank support for, and participation in,

the kinds of resource generation and transfer schemes reviewed above can be argued on humanitarian, environmental and economic grounds. It is clear that the biological and natural resource base on which so many transnational industries depend is likely to diminish rapidly in quality and quantity unless the vicious circle of poverty-induced environmental degradation is checked in much of the world. Similarly, market and regulatory stability desired by most firms will be hard to achieve if massive social and political unrest is unleashed by economic stagnation and environmental impoverishment.

B. Contributions by transnational corporations to sustainable development

84. Sustainable development management will require that transnational corporations expand the criteria traditionally used for deciding where and what to invest in (beyond availability of natural resources, proximity to markets, tax incentives by Governments etc.) to include, for example, the extent to which the investment either depletes non-renewable resources or uses renewable resources. This should apply to industrialized countries as well as to developing countries. However, since developing countries are particularly dependent on their natural resource base, increased transnational corporate investment taking resource conservation into account is crucial for long-term economic growth.

85. Transnational corporations may also contribute to sustainable development by providing developing countries with environmentally sound investments that generate manufacturing exports and diversify the economies away from dependence on volatile commodity markets. These can especially assist developing country Governments by seeking, developing and cooperating in projects in the basic services industries such as health care, sanitation, primary education and mass transportation.

86. Transnational corporations have supported worthy social causes as a way of assisting the communities and of projecting a positive image to consumers and government officials in the countries where they operate. Their contributions have been either financial or in-kind, encompassing ethical investing, community work by employees, or public education training by staff members. For example, some companies have built plants in areas of high unemployment, or have used suppliers that help train and employ marginalized people. Recent awareness of the environmental problems facing the planet has also prompted corporations to take initiatives that help mitigate environmental problems such as the destruction of rain forests or the killing of dolphins.

87. Corporate in-kind environmental donation programmes are expanding in varying ways. Individual corporations donate their products to clean oil-spills or make corporate land available for nature conservation. The International Environment and Development Service of the World Environment Centre provides free or subsidized technical services (drawing on the resources of 45 transnational corporations) to enterprises in developing countries so as to enhance urban and industrial health, safety and pollution prevention. Were more corporations to make similar contributions, the level of expertise and skills to deal with environmental problems available to developing countries would significantly increase. However,

there is a great disparity in the level of environmental and social expenditures by individual firms. An agreed upon minimum level would provide an impetus for non-contributors to make an appropriate effort to support sustainable development in developing countries.

VI. CONCLUSION

88. The transformation of the international economy into one that is based on sustainable development will be a complex and challenging process. It will involve major changes by a wide range of actors: Governments, trade unions, farmers, industry and the general public, to mention a few. It will also involve extensive re-examination of the structure of key industrial sectors, such as energy, food production, financial accounting and mining sectors. Within the intergovernmental arena, also, new and different forms and approaches will need to be created. In the preparation for the 1992 United Nations Conference on Environment and Development, each section of the United Nations system has been asked to endeavour to make a contribution within its sphere of competence, while keeping in mind the interrelatedness required for sustainable development as a whole.

89. This places an unusual constraint on each intergovernmental body and secretariat in making its contribution to the Preparatory Committee for the Conference. By their nature, the separate specialized bodies need to concentrate on their authorized area of work. In the case of the contribution from the Commission on Transnational Corporations and the Centre, any research and policy recommendations will be focused on the transnational aspects of sustainable development. The international agenda for the 1990s and beyond may well focus on the need for global policies and instruments to channel and harness the enormous potential that transnational corporations possess in order to obtain the objectives of sustainable development, while seeking means to control and reduce any negative impacts contrary to those goals. While the core topics covered are specific to the structure of transnational corporations, some of the areas may have analogous aspects for nationally based industries and apply to those firms as well. It is clear that the effective implementation of sustainable development cannot be accomplished by transnational corporations alone. Even the most committed firms cannot operate sustainably unless, as a minimum, Governments have in place a policy framework conducive to sustainable economic and social development. It is within this context that this interim, comprehensive and analytical report has identified five developmental themes on the basis of which transnational corporations could take measures to promote sustainable development.

Notes

1/ World Commission on Environment and Development, Our Common Future (London, Oxford University Press, 1987), p. 9.

2/ See Climate Change and Transnational Corporations: Analysis and Trends (to be issued as a United Nations publication); and Transnational Corporations and the Transfer of New and Emerging Technologies to Developing Countries (United Nations publication, Sales No. E.90.II.A.20), pp. 64-100.

Notes (continued)

3/ See Climate Change and Transnational Corporations ..., pp. 7-8.

4/ See Sharon L. Roan, Ozone Crisis: The Fifteen-Year Evolution of Sudden Global Emergency (New York, Wiley, 1989), pp. 208-209.

5/ Thirteen transnational companies in the automotive industry supply 80 per cent of the total world market; Deborah Bleviss, The New Oil Crisis and Fuel Economy Technologies (New York, Quorum Books, 1988), p. 7.

6/ "Top twenty companies hold 94% of world market", AGROW (Richmond, Surrey, United Kingdom, PJB Publications Ltd., 1 June 1990), p. 1.

7/ See Climate Change and Transnational Corporations ..., p. 80.

8/ Transnational Corporations in the Bauxite/Aluminium Industry (United Nations publication, Sales No. E.81.II.A.5), p. 1.

9/ Chemical Manufacturers Association, "Responsible care: a public commitment, guiding principles" (Washington, D.C., April 1990).

10/ European Council of Chemical Manufacturers Federations, A Guide to Safe Warehousing for the European Chemical Industry (Brussels, 1987), para. 1.2.

11/ International Chamber of Commerce, Sustainable Development, The Business Approach, publication 210/330 (Paris, November 1989).

12/ See Report of the Conference of FAO, Twenty-third Session, Rome, 9-28 November 1985, resolution 10/85, annex.

13/ International Group of National Associations of Manufacturers of Agrochemical Products, "Implementing the FAO Code of Conduct: report on a survey to assess the progress being made by industry with the implementation of the International Code of Conduct on the Distribution and Use of Pesticides" (Brussels, September 1989).

14/ Fourth ACP-EEC Convention, signed at Lomé on 15 December 1989, Title 1, Environment, article 39.

15/ Organization of African Unity, Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Afria, adopted 29 January 1991, see article 1, "Definitions", and article 4, "General Obligations".

16/ See Climate Change and Transnational Corporations ..., p. 94.

17/ Official Records of the General Assembly, Forty-second Session, Supplement No. 25 (A/45/25 and Corr.1), decision 14/27.

Notes (continued)

18/ See Consolidated List of Products Whose Consumption and/or Sale Have Been Banned, Withdrawn, Severely Restricted or Not Approved By Governments (United Nations publication, Sales No. E.87.IV.1).

19/ United Nations Environment Programme, Environmental Law in the United Nations Environment Programme (Nairobi, 1990), p. 2.

20/ Transnational Corporations and the Transfer of New and Emerging Technologies to Developing Countries ..., pp. 64-100.

21/ Climate Change and Transnational Corporations ..., pp. 4-5.

22/ A/45/46, decision 1/8.

23/ International Chamber of Commerce, Sustainable Development ..., p. 7.

24/ United Nations Centre on Transnational Corporations, Benchmark Corporate Environmental Survey (New York, 1990).

25/ Transnational Corporations and Industrial Hazards Disclosure, (to be issued as a United Nations publication).

26/ Council of the European Communities, Directive 85/337/EC of 27 June 1985.

27/ Our Common Future ..., p. 64.

28/ Ibid., p. 86.

29/ Transnational Corporations and Industrial Hazards Disclosure ...

30/ The Centre has initiated a research project on the development of minimum standards for carrying out a public environmental performance report (see E/C.10/1991/3/Add.1); United Nations Development Programme International Conservation Financing Project, Natural Endowments: Financing Resource Conservation for Development (Washington, D.C., World Resources Institute, 1989); Linda Starke, Sign of Hope: Working Towards Our Common Future (Oxford, Oxford University Press, 1990), chap. 7; World Conservation Union, UNEP and World Wildlife Fund for Nature, Caring for the World: A Strategy for Sustainability, second draft (Gland, Switzerland, June 1990), William A. Delphos, Environment Money: The International Business Executive's Guide to Government Resources (Washington, D.C., Venture Publishing, 1990).

31/ International Chamber of Commerce, Environmental Auditing (Paris, 1989), p. 6.

32/ Our Common Future ..., p. 231.

Notes (continued)

33/ J. Elkington, The Environmental Audit: A Green Filter for Company Policies, Plants, Processes and Products (United Kingdom, World Wildlife Fund for Nature, 1990), p. 9.

34/ Efforts to design a standardized format for corporate environmental financial reporting are already under way in the Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting (see E/C.10/AC.3/1990/5 and E/C.10/AC.3/1991/5).

35/ International Labour Organisation, Tripartite Declaration on Principles concerning Multinational Enterprises and Social Policy, 1977, para. 37.

36/ Our Common Future ..., p. 231.

37/ Organisation for Economic Cooperation and Development, Ministerial Declaration on the Avoidance of Accidents Involving Hazardous Substances (Paris, 1989).

38/ Transnational Corporations and Industrial Hazards Disclosure ..., p. 51.

39/ For a review see Natural Endowments: Financing Resource Conservation for Development ...

40/ See Konrad von Moltke and Paul J. De Long, "Negotiating in the global arena: debt-for-nature swaps", Resolve, No. 22, (1990).